F. J. WEHNER.

Compressing Apparatus.

No. 216,364. Patented June 10, 1879.

Fig. 1

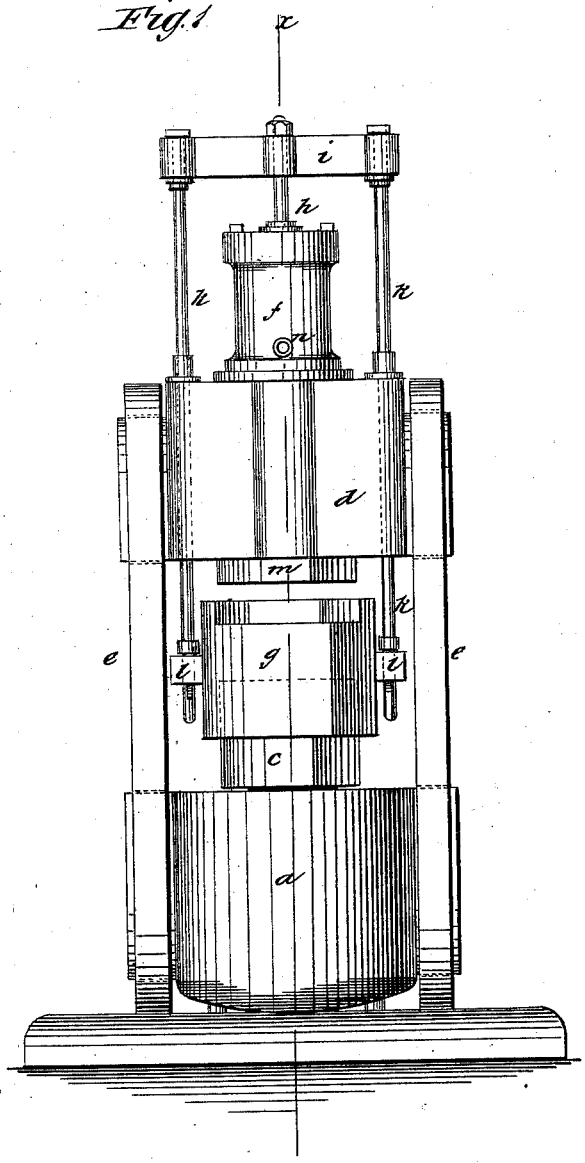
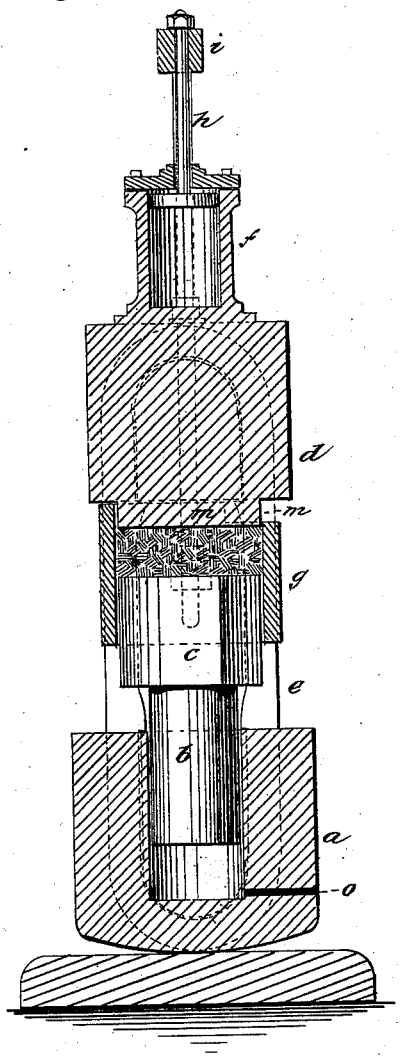


Fig. 2.



WITNESSES:

Francis. McArdle.

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UNITED STATES PATENT OFFICE.

FRANCIS J. WEHNER, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN COMPRESSING APPARATUS.

Specification forming part of Letters Patent No. **216,364**, dated June 10, 1879; application filed October 10, 1878.

To all whom it may concern:

Be it known that I, FRANCIS J. WEHNER, of New Orleans, in the parish of Orleans and State of Louisiana, have invented a new and Improved Compressing Apparatus, of which the following is a specification.

The object of my invention is to furnish an apparatus for compressing semi-fluid substances, or substances of granular character, and particularly adapted for crushing slabs of ice and forcing the pieces into a solid homogeneous mass.

In the accompanying drawings, Figure 1 is an elevation of my improved compressor, and Fig. 2 is a vertical section taken on the line *x x*.

Similar letters of reference indicate corresponding parts.

a is a cylinder, in which is a piston or ram, *b*, that has a head, *c*. Above the cylinder *a* is the bed or platen *d*, and the platen *d* is supported and held in position relatively to the cylinder *a* by the side yokes, *e e*.

At the upper side of the platen *d* is a smaller cylinder, *f*, the piston-rod *h* of which carries a cross-head, *i*. *g* is a mold, shown octagon in shape and fitting closely around the head of ram *b*, the head *c* being of corresponding shape. *k k* are rods from the cross-head *i* to the side lugs, *l l*, of the mold. These rods *k* pass through bed *d*, and are rigidly connected to the cross-head and mold, so that those parts will move together.

The under side of the platen *d* is formed with a projection, *m*, corresponding in size and shape to the head *c* of the ram, and intended to fill the space cut out in front of the mold *g*.

The machine will be operated as follows: The material to be compressed is to be placed upon the head *c* and held in place by the sides of mold *g*, which is raised more or less for that purpose by admitting water or steam under pressure to the cylinder *f* through pipe *n*. When the desired quantity of material is in place, the mold *g* will be raised until it comes against the platen *d*, as seen in Fig. 2, and the material will then be entirely inclosed, and may be compressed by the ram to any extent by admitting water or steam into the cylinder *a*, through the opening *o*, at the requisite pressure. The ram *b* being then allowed to sink, and the mold *g* forced down by pressure in cylinder *f*, or otherwise, the compressed material may be removed by any desired means.

This machine is adapted for compressing any substance that requires support in a mold during pressure.

In some cases the substance to be compressed might be fed in through the side of the mold *g* after it was raised in position, or through the upper platen, or, by special devices, through the ram itself.

I do not limit myself to any particular motive power for operating the ram or raising and lowering the mold, as it may be done otherwise than as shown.

I am aware that a fixed die and a plunger operated by steam or hydraulic power have been combined with another cylinder and piston operating independently to elevate and depress the plate by which the sheet metal is held over the die; also, that it is not new to use a wheel moved intermittently and provided with molds that slide up and down on the follower; but

What I claim as new and of my invention is—

The cylinder *a* and plate *d m*, connected by the side yokes, *e*, in combination with the cylinder *f* and slide-mold *g*, connected by mechanism *h i k l*, as and for the purpose specified.

FRANCIS J. WEHNER.

Witnesses:

G. W. SPOONER,

JEFF. S. REBOLI.